

WHAT IS CLAIMED IS:

1. A display system comprising:

a plurality of terminals, each terminal having a screen capture function, and sending image data, captured using the screen capture function, over a network; and

a network interactive display device, including a display, receiving the captured image data transmitted from the terminal through the network, and having a multi-window screen presentation function for synthesizing the captured image data into single screen multi-window format data to be displayed on a display screen of the display,

wherein, as processes required to present the single screen multi-window format data on the display screen of the display of the network interactive display device, the terminal performs a size conversion process of an image size of the image data captured using the screen capture function and the network interactive display device acquires the captured image data subsequent to the size conversion thereof from the terminal, and synthesizes the received captured image data.

2. A display system according to claim 1, wherein the network interactive display device divides the display screen of the display into windows of the number equal to the number of terminals to be displayed, determines a display size of the window assigned to each terminal to be displayed, and sends information of the display size to the terminal, and wherein

the terminal performs the size conversion process on the image size of the captured image data to the received display size when the terminal receives the display size.

3. A display system according to claim 1, wherein, in addition to the size conversion process on the image data captured using the screen capture function, the terminal further performs a color conversion process on the captured image data in accordance with a color count of the display of the network interactive display device before sending the captured image data to the network interactive display device.

4. A display system according to claim 3, wherein the network interactive display device also sends the color count of own display to the terminal when sending the display size to the terminal, while the terminal performs the color conversion process in response to the color count received from the network interactive display device.

5. A network interactive display device connected to each of a plurality of terminals through a network, each terminal having a screen capture function, the network interactive display device comprising:

- a display;
- a communication unit for communicating in a two-way fashion with each of the terminals; and
- a display control unit,

wherein the communication unit receives the image data

which has been captured by each terminal through the screen capture function thereof, and which has been size converted to a predetermined image size by each terminal, and the display control unit has a multi-window screen presentation function for synthesizing the captured image data received by the communication unit into single screen multi-window format data to be displayed on a display screen of the display.

6. A network interactive display device according to claim 5, wherein the display control unit has an insertion function for inserting a new window into a current display screen to display the new window.

7. A network interactive display device according to claim 5, wherein the terminal that provides the captured image data to be displayed on the display screen of the display is selected in a two-way communication of the communication unit by one of the network interactive display device and the terminal.

8. A network interactive display device according to claim 5, wherein the display control unit has an expansion display function for expanding a predetermined window from among a plurality of windows forming a multi-window screen displayed on the display screen of the display.

9. A network interactive display device according to claim 5, wherein the display control unit has a single-window

screen selection function for switching the display screen from a predetermined window from among a plurality of windows forming a multi-window screen displayed on the display screen of the display to a single-window full screen.

10. A network interactive display device according to claim 5, wherein the display control unit has an erase function for erasing a predetermined window from among a plurality of windows forming a multi-window screen displayed on the display screen of the display.

11. A network interactive display device according to claim 10, wherein the predetermined window is selected by one of the network interactive display device and the terminal in a two-way communication of the communication unit thereof.

12. A network interactive display device according to claim 5, wherein the image captured data received from the terminal is obtained by designating the whole or a portion of the display screen of the terminal.

13. A network interactive display device according to claim 5, wherein the captured image data received from the terminal is obtained by detecting and capturing only a change on the display screen of the terminal.

14. A network interactive display device according to claim 5, further comprising a display size determining unit

that divides the display screen of the display into windows of the number equal to the number of terminals to be displayed, and determines a display size of the window to which the terminal to be displayed is assigned, and a controller that sends the display size determined by the display size determining unit to the corresponding terminal through the communication unit, wherein the controller receives, through the communication unit, the captured image data, having the converted size equal to the display size of the window assigned to the terminal, from the terminal to which the display size is sent, and controls the display control unit to synthesize the received captured image data into single screen multi-window format data to be displayed on the display screen of the display.

15. A network interactive display device according to claim 14, wherein an aspect ratio of the window assigned to the terminal to be displayed is equalized to an aspect ratio of the display screen of the display of the terminal.

16. A network interactive display device according to claim 5, wherein, through the communication unit, the controller also sends a display color count of the display to the terminal when sending the display size to the terminal, and receives the captured image data having the converted size equal to the display size of the window assigned to the terminal and having the display color count converted to the display color count of the display of the network interactive

display device, from the terminal to which the display size and the display color count have been sent, and controls the display control unit to synthesize the received captured image data into single screen multi-window format data to be displayed on the display screen of the display.

17. A terminal connected to a network interactive display device according to claim 5 through a network, the terminal comprising:

a display;

a communication unit that communicates in a two-way fashion with the network interactive display device;

a screen capture processor that captures the content displayed on the display screen of the display;

an image converter which converts the image data captured by the screen capture processor to data of a predetermined image size; and

a controller that sends the captured image data, size converted by the image converter, from the communication unit to the network interactive display device,

wherein the terminal generates the captured image data that is to be displayed on one of the multi windows displayed on the display screen of a display of the network interactive display device.

18. A terminal according to claim 17, wherein the display screen of the display of the network interactive display device is divided into windows of the number equal to the

number of terminals to be displayed, a display size of the window assigned to each terminal to be displayed is determined, and the image converter converts the image data captured by the screen capture processor to data of the display size assigned to own terminal.

19. A terminal according to claim 17, wherein the image converter performs a color conversion process on the captured image data to match the display color count of the display of the network interactive display device in addition to the size conversion process, and the controller sends the captured image data, which has been subjected to the size conversion process and the color conversion process, from the communication unit to the network interactive display device.

20. A network interactive display device connected to each of a plurality of terminals through a network, each terminal having a screen capture function, the network interactive display device comprising:

a display;

a communication unit for communicating in a two-way fashion with each of the terminals; and

a display control unit,

wherein the display control unit has a multi-window screen presentation function for synthesizing the captured image data, captured by each terminal through the screen capture function and received by the communication unit, into single screen multi-window format data to be displayed on display screen of

the display of the network interactive display device.

21. A network interactive display device according to claim 20, wherein the display control unit has an insertion function for inserting a new window into a current display screen to display the new window.

22. A network interactive display device according to claim 20, wherein the terminal that provides the captured image data to be displayed on the display screen of the display is selected in a two-way communication of the communication unit by one of the network interactive display device and the terminal.

23. A network interactive display device according to claim 20, wherein the display control unit has an expansion display function for expanding a predetermined window from among a plurality of windows forming a multi-window screen displayed on the display screen of the display.

24. A network interactive display device according to claim 20, wherein the display control unit has a single-window screen selection function for switching the display screen from a predetermined window from among a plurality of windows forming a multi-window screen displayed on the display screen of the display to a single-window full screen.

25. A network interactive display device according to

claim 20, wherein the display control unit has an erase function for erasing a predetermined window from among a plurality of windows forming a multi-window screen displayed on the display screen of the display.

26. A network interactive display device according to claim 25, wherein the predetermined window is selected by one of the network interactive display device and the terminal in a two-way communication of the communication unit thereof.

27. A network interactive display device according to claim 20, wherein the captured image data received from the terminal is obtained by designating the whole or a portion of the display screen of the terminal.

28. A network interactive display device according to claim 20, wherein the captured image data received from the terminal is obtained by detecting and capturing only a change on the display screen of the terminal.

29. A network interactive display device according to claim 20, wherein the display control unit comprises a window area information generator which divides the display screen of the display into windows of the number equal to the number of terminals to be displayed, and generates window area information containing a display size of the window to which the terminal to be displayed is assigned, and information identifying a display position of the window, an image

synthesizer which synthesizes the captured image data from the terminals into single screen multi-window format data in accordance with the window area information generated by the window area information generator, thereby generating synthesized image data, and an image processor which processes the synthesized image data generated by the image synthesizer, thereby generating display image data and outputting the display image data to the display.

30. A network interactive display device according to claim 29, wherein the image synthesizer synthesizes the captured image data by contracting or expanding the captured image data from each terminal with an aspect ratio of the image size of the captured image data maintained.